MALPOSITION OF THE APPENDIX AS A CAUSE OF FUNCTIONAL DISTURBANCES OF THE INTESTINE.[1]

BY JOSEPH A. BLAKE, M.D.,
OF NEW YORK CITY,
Surgeon to Roosevelt Hospital.

A NUMBER of patients upon whom I have operated for supposed appendicitis have been entirely relieved of their symptoms; yet upon examination no inflammatory conditions in the appendix have been found.

All these patients presented a similar syndrome of symptoms which resembled those occurring in the course of a mild chronic appendicitis, but were not sufficiently characteristic to warrant a definite diagnosis of that disease.

The following cases sufficiently illustrate the symptoms and the anatomical conditions:

CASE I.—A. A.; aged forty years; female; has had attacks of pain in the right lower quadrant of the abdomen for four years. The pain has never been severe, but has been rather an extreme discomfort. After a maximum of discomfort for two or three days there has been gradual improvement. There has never been marked tenderness. Occasionally there has been nausea with the pain, but nausea has not been a feature. There has not been a temperature worthy of note in any attack.

The attacks have been accompanied with constipation and intestinal gas. After the bowels act freely the pain diminishes. Between the attacks there has often been discomfort, with rumbling of gas. The patient is a very active, non-imaginative woman engaged in arduous charitable work. The attacks, while interfering with her work, have rarely confined her to her bed.

P. E.; well-nourished woman. The examination of the abdomen revealed a slightly movable right kidney. During the

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attack there was some distention of the caput coli with gas and slight tenderness at the region of the appendix, but no palpable mass.

Operation, September 10, 1901.—The appendix was of the third type (Treves), two and one-half inches long. The meso-appendix was very short, suspending the appendix and with it the cæcum well up under the ileocolic junction; at its attachment to the appendix it caused a sharp bend in that organ. At the point of bending the lumen of the appendix was somewhat narrowed. There were no signs of recent or old inflammation. On dividing the meso-appendix the cæcum straightened out away from the ileocolic junction. The appendix was removed.

The patient has been entirely free of her attacks since the operation.

CASE II.—W. S.; forty-seven years of age; male. Active business man, somewhat neurasthenic. Attacks for two years at intervals of one to two months.

The attacks have been characterized by gas pains in the right lower quadrant of the abdomen, with little or no tenderness. Diarrhœa has been present in several attacks. Constipation has never been a feature. The patient has found that relief has at once followed a free catharsis with castor oil.

The patient has himself made a diagnosis of appendicitis and demands relief.

The physical examination was negative except for a very slight tenderness in the appendiceal region during the attacks.

Operation was decided upon after observing several attacks, and the following conditions were found: The appendix was implanted at the axial end of the cæcum (second type of Treves); it was four inches long; its extremity was slightly bulbous; there was no stricture or sign of inflammation. The meso-appendix was short and suspended the end of the cæcum, as in the first case, up under the ileocolic junction. Appendectomy allowed the cæcum to regain its normal relation.

The operation has been followed by complete relief.

A number of the cases observed have resembled the ones just reported in the relations of the appendix and cæcum to the ileocolic junction, namely, being drawn up under it by a short meso-appendix.

Another relation of the appendix may be present as was found in the following case:

CASE III.—The patient, E. W., a nurse, thirty-six years old, had suffered for two years or more with constantly recurring pains in the right lower quadrant, but not of sufficient violence to keep her off duty. There had been no signs typical of inflammation. Operation revealed an appendix four inches in length of the third type of implantation and in the retrocæcal position, the end of the cæcum being rolled up under itself.

Operation in this case was also followed by complete relief.

The above cases are fair examples of others I have operated upon. In looking over the notes of ten of these, two were found in which there were well marked evidences of enteroptosis and two in which the right kidney was distinctly movable.

In most of the cases traction was exerted on the cæcum through the appendix by a short meso-appendix; in a few the cæcum seemed to be suspended by the appendix being adherent behind the colon. Evidences of inflammation of the appendix were either wholly absent or so trivial as to hardly be sufficient to explain the symptoms.

An explanation of this anatomical condition is found in the development of this part of the alimentary tract. It is well known that the cæcum in late intra-uterine life descends from a position immediately below the liver to its normal one in the right iliac fossa. The descent is due rather to an increase in length of the descending colon than to a dropping of the colon. As the length of the colon increases, its vessels must also increase proportionately or a folding of the gut will occur.

In the class of cases under discussion, this disparity of growth occurs, and a folding of the gut results at the junction of the cæcum with the appendix from an inadequate growth of the vessels in the mesenteriolum. As these vessels normally pass behind the ileocolic junction, the appendix is held up behind that point and through it the end of the cæcum. In many instances a sharp kink of the appendix occurs at the point where its main vessel reaches it.

In some of the cases it appeared as if a constriction of the ileum might readily occur by an overdistended cæcum and ascending colon drawing it down over the band produced by the short meso-appendix.

With such a mechanical relation of these structures, it would seem that the symptoms complained of by these patients could be caused in the following ways, namely, by the tugging on the appendix and meso-appendix produced by an overdistended or overloaded cæcum; by a partial obstruction produced either in the ileum or the colon by their bending over the fixed appendix; or possibly by interference with the circulation of the cæcum and ascending colon.

When we analyze the symptoms, we see that they are an evidence of functional disturbances rather than inflammatory conditions. Fever and marked tenderness are absent. The pain is more a sense of discomfort, and lacks the violent colicky character accompanying inflammation of the appendix. The exacerbations of the pain are generally accompanied by constipation or evidences of intestinal fermentation, such as diarrhœa and flatus. The discomfort between the exacerbations is more or less continuous. Purgation in nearly all instances was followed by at least temporary relief.

With this evidence, it would seem fair to ascribe the symptoms exhibited by these patients to the relation of the appendix and its mesentery to the cæcum rather than to an inflammation of the appendix itself, even if the latter condition were found.

I am well aware of the danger of advancing a theory of this kind, since it might well be used for extending the field of meddlesome surgery. For this reason I have hesitated, and, although I have had the theory in mind for four or five years, I have abstained from bringing it forward until the repeated observation of this condition has forced me to believe that it is more than theory.

While most of the patients were women and neurasthenia might be a factor in the production of the symptoms, in the greater number it could be eliminated.

This relation may also explain the appendiceal pain observed in some cases of movable kidney in which appendectomy gives relief. In enteroptosis a short meso-appendix may readily cause tugging upon the appendix and cæcum. Finally, the constant tug on the appendix and cæcum is undoubtedly a cause of true appendicitis.